

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1-78. (Canceled).

79. (Previously Presented) A method for scheduling transmissions of mobile terminal in a mobile communication system, the method comprising:

receiving at the base station from a radio network controller Quality of Service (QoS) attributes of a plurality of flows to be multiplexed onto a single dedicated uplink channel by the mobile terminal,

receiving a scheduling request from the mobile terminal at the base station, wherein the scheduling request (i) comprises an identifier identifying one flow of the plurality of flows and (ii) requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows to be multiplexed onto the dedicated uplink channel,

determining, based on the identifier within the scheduling request, the QoS attributes associated with the flow identified by the identifier within the scheduling request, and

scheduling by the base station the uplink resource for transmission of data of said plurality of flows to be multiplexed onto the dedicated uplink channel by said mobile terminal, based on the identifier identifying said one flow of said plurality of flows and said QoS attributes that are determined by said determining operation and that are associated with the flow identified by the identifier within the scheduling request.

80. (Canceled).

81. (Previously Presented) The method according to claim 79, wherein each flow of said plurality of flows has a priority.

82. (Previously Presented) The method according to claim 79, wherein the plurality of flows are multiplexed on a MAC-d flow.

83. (Previously Presented) The method according to claim 79, wherein the QoS attributes of a respective flow of said plurality of flows comprise a transmission mode associated with the data of the flow.

84. (Previously Presented) The method according to claim 83, wherein the transmission mode indicates whether data of a respective flow of said plurality of flows is to be transmitted applying an additional gain factor.

85. (Previously Presented) The method according to claim 79, wherein the scheduling request further comprises information on a buffer occupancy at the mobile terminal and on a transmission power at the mobile terminal.

86. (Previously Presented) The method according to claim 79, wherein the scheduling request received by the base station is transmitted via Medium Access Control (MAC) control signaling.

87. (Previously Presented) The method according to claim 79, wherein scheduling by the base station comprises transmitting a scheduling assignment from the base station to the mobile terminal, wherein the scheduling assignment indicates the uplink resource allocated to the mobile terminal for transmission of the data of said plurality of flows to be multiplexed onto the dedicated uplink channel by said mobile terminal.

88. (Previously Presented) The method according to claim 79, wherein the QoS attributes are received from a network element terminating the radio resource control signaling of the mobile terminal.

89. (Previously Presented) The method according to claim 88, wherein the QoS attributes are included in a configuration message.

90. (Previously Presented) The method according to claim 88, wherein the QoS attributes are received by the base station from the radio network controller in a radio link setup message or a radio link reconfiguration message.

91. (Previously Presented) The method according to claim 88, wherein the QoS attributes are received from a serving radio network controller.

92. (Previously Presented) The method according to claim 79, wherein the plurality of flows are associated to respective radio bearers between the mobile terminal and radio network

controller and the method further comprises mapping QoS attributes of the radio bearers to the QoS attributes of the respective associated flow.

93. (Previously Presented) The method according to claim 92, wherein the mapping of the QoS attributes comprises taking into account uplink delays on the interface between the base station and the radio network controller.

94. (Canceled).

95. (Previously Presented) The method according to claim 79, wherein the identifier comprised in the scheduling request identifies the highest priority flow.

96. (Previously Presented) The method according to claim 95, wherein the highest priority flow has the highest QoS demands.

97. (Previously Presented) The method according to claim 79, wherein the QoS attributes comprise at least one of a transfer delay, a guaranteed bit rate, a traffic handling priority, a service type identification, a traffic class and a reordering release timer of the reordering buffer in the Medium Access Control (MAC) entity.

98. (Previously Presented) The method according to claim 79, wherein the scheduling request further comprises a service type indicator indicating that data of one flow of the plurality of flows to be multiplexed onto the dedicated uplink channel is delay-critical.

99. (Previously Presented) The method according to claim 79, further comprising considering a predetermined gain factor to be additionally applied to the transmission when scheduling the mobile terminal.

100. (Previously Presented) A base station for scheduling a plurality of transmissions of a mobile terminal in a mobile communication system, said base station comprising:

    a communication section adapted to receive from a radio network controller Quality of Service (QoS) attributes of a plurality of flows to be multiplexed onto a single dedicated uplink channel by a mobile terminal, and further adapted to receive a scheduling request from the mobile terminal, wherein the scheduling request (i) comprises an identifier identifying one flow of the plurality of flows and (ii) requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows to be multiplexed onto the dedicated uplink channel,

    a determining section configured to determine based on the identifier within the scheduling request the QoS attributes associated with the flow identified by the identifier within the scheduling request, and

    a scheduling section adapted to schedule the uplink resource for transmission of data of said plurality of flows to be multiplexed onto the dedicated uplink channel by said mobile terminal, based on the identifier identifying said one flow of said plurality of flows and said QoS attributes of the flow identified by the identifier within the scheduling request as determined by the determining section.

101. (Canceled).

102. (Previously Presented) The base station according to claim 100, wherein each flow of said plurality of flows has a priority.

103. (Previously Presented) The base station according to claim 100, wherein the plurality of flows are multiplexed on a MAC-d flow.

104. (Previously Presented) The base station according to claim 100, wherein the scheduling request further comprises information on a buffer occupancy and on a transmission power at the mobile terminal.

105. (Previously Presented) The base station according to claim 100, wherein the communication section is adapted to transmit a scheduling assignment to the mobile terminal, wherein the scheduling assignment indicates the uplink resource allocated to the mobile terminal for transmission of the data of the plurality of flows to be multiplexed onto the dedicated uplink channel.

106. (Canceled).

107. (Previously Presented) The base station according to claim 106, wherein the QoS attributes are included in a configuration message.

108. (Previously Presented) The base station according to claim 106, wherein the QoS attributes are received from a serving radio network controller.

109. (Previously Presented) The base station according to claim 100, wherein the identifier comprised in the scheduling request identifies the highest priority flow.

110. (Previously Presented) The base station according to claim 109, wherein the highest priority flow has the highest QoS demands.

111. (Previously Presented) The base station according to claim 100, wherein the QoS attributes comprise at least one of a transfer delay, a guaranteed bit rate, a traffic handling priority, a service type identification, a traffic class and a reordering release timer of the reordering buffer in the Medium Access Control (MAC) entity.

112. (Previously Presented) The base station according to claim 100, wherein the scheduling request further comprises a service type indicator indicating that data of one flow of the plurality of flows to be multiplexed for transmission on the dedicated uplink channel is delay-critical.

113. (Previously Presented) The base station according to claim 100, wherein the scheduling unit is adapted to consider a predetermined gain factor to be additionally applied to the transmission when scheduling the mobile terminal.

114-117. (Cancelled)

118. (Currently Amended) A non-transitory computer readable storage medium for storing instructions that when executed by a processor of a base station in a mobile communication system cause the base station to schedule transmissions by a plurality of mobile terminals, by:

receiving at the base station from a radio network controller Quality of Service (QoS) attributes of a plurality of flows to be multiplexed onto a single dedicated uplink channel by a mobile terminal,

receiving a scheduling request from the mobile terminal at the base station, wherein the scheduling request (i) comprises an identifier identifying one flow of the plurality of flows and (ii) requests allocation of an uplink resource to the mobile terminal for transmitting data of the plurality of flows to be multiplexed onto the dedicated uplink channel, and

determining based on the identifier within the scheduling request the QoS attributes associated with the flow identified by the identifier within the scheduling request, and

scheduling by the base station the uplink resource for transmission of data of said plurality of flows to be multiplexed onto the dedicated uplink channel by said mobile terminal based on the identifier identifying said one flow of said plurality of flows and said QoS attributes that are determined by the determining operation and that are associated with the flow identified by the identifier within the scheduling request.

119. (Cancelled)

120. (Previously Presented) The method according to claim 79, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

121. (Previously Presented) The method according to claim 120, wherein the PDU is a MAC-e PDU.

122. (Previously Presented) The base station according to claim 100, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

123. (Previously Presented) The base station according to claim 122, wherein the PDU is a MAC-e PDU.

124. (Previously Presented) The method according to claim 113, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

125. (Previously Presented) The method according to claim 124, wherein the PDU is a MAC-e PDU.

126. (Cancelled)

127. (Previously Presented) The mobile terminal according to claim 125, wherein the PDU is a MAC-e PDU.

128. (Currently Amended) The non-transitory computer readable storage medium according to claim 118, wherein the scheduling request requests allocation of an uplink resource to the mobile terminal for transmitting data of said plurality of flows multiplexed to a protocol data unit (PDU) on the dedicated uplink channel.

129. (Currently Amended) The non-transitory computer readable storage medium according to claim 128, wherein the PDU is a MAC-e PDU.